Ix Métraux :--42 E-6 (1929) 1930 SF10 Chiriguano SF10
Guarani SM4

/319 cont./

there, for the Indians are excellent farmers. In the course of the war with these populations the Indians of his tribe, he added, destroyed and depopulated numerous villages, but doubtless they had already rebuilt them. He was asked whether there were large rivers and springs along the way. He answered that he saw rivers, but that they did not have much water; however, there were other very deep ones, springs, lagoons, game, deer and tapirs, fruits and honey. He was asked whether at the time his people made war on these tribes he had seen any who had silver and gold. He said that in the villages they pillaged there were many silver and gold plaques, /320/ labrets, ear ornaments, bracelets, crowns, axes, small vessels; and that it was all taken away from them when they were put to rout. Those who escaped were able to take along some silver plaques, beads, labrets; but the Guayacapo stole them when they tried to pass through their territory and killed them. Those who settled in the bush had a few, and he had heard it said that at the present time it was the Xaray who possessed this silver. He declared he had seen the Xaray, when they war upon the Indians, take out silver plaques which they had carried away and plundered in the interior lands."

Against this bundle of proofs attesting to the recent character of the Guarani migration, what is the value of Garcilaso de la Vega's vague affirmation (Vol. II, pp. 279-281) which some people want to oppose to it? According to this kind narrator, the Inca Yupanki would have undertaken the conquest of the Chiriguano country for the virtuous purpose of converting them to the good natural religion of the Peruvians. The Chiriguano would have been veritable monsters, feeding on human flesh, uniting by chance, living without fire or law, burying the bones of their dead in caves or in the hollows of trees. In a word, except for anthropophagy and the mention of the maloca (1), there is nothing in the picture of the

1. The description Garcilaso (Vol. II, p. 281) gives us of the large house of the Chiriguano is perfectly exact and very

/320 cont./

interesting: "they make a very big dormitory and, within it, as many small rooms as there are residents, and so small that they do not have room for more persons, and it is enough for them, because they do not have furniture, nor do they have wearing apparel and hence they go about naked." /Translated from the Spanish./ These facts agree on every point with those of the Relaciones geográficas, etc. (Vol. II, Plate CIV) and of Lizárraga (Vol. I, p. 359) on the same subject. The Guaraní, just like the Tupinambá and other Tupí tribes, lived in malocas, gigantic halls capable of containing more than 150 persons and which often in themselves formed the village. The existence of this type of dwelling among the Chiriguano in the 16th and 17th centuries constitutes new proof for the recent character of their migration. In the 19th century we find them already in possession of the small rectangular house which they still have now and where one single family lives. (See Métraux, ?, p. 51.)

novelist Garcilaso which might allow one to suppose that he really knew who the Chiriguano were. As for this conquest by the Inca, it would have been barely an attempt at conquest... Garcilaso confuses the Chiriguano with all the tribes of the eastern slopes of the Andes whom he had vaguely heard mentioned. Let us note that he is the only one to attribute this expedition to the Inca Yupanki, while the other chroniclers, better informed, are satisfied to say that the Inca Yupanki made an expedition against the Antis, probably around Cuzco. Unfortunately the vogue this pleasant writer enjoyed at a time when the history of America was still in limbo bluffs some modern critics into believing him, and they go so far as to prefer one of his unwarranted affirmations to the serious /321/ and precise evidence of chroniclers who get their information at first hand and from reliable sources.

Is Mémoire--59 8-5 (1959) 1856 SF14 Chiriguano SF13
Guaraní SM4

/301 cont./

The pernicious and corruptive influence of the white man, which makes so many ravages among the pure Chané, has at least spared their pottery industry. They still manufacture considerable quantities of vessels which they sell to the other Indians and to the whites. As clever business men they complied with the taste of their new clients, and the motifs with which they decorate the pieces they export are as hideous and gaudy as the ones which ornament half-breed or creole textile fabrics or baskets.

Moreover, we can understand historically certain phases of the transformation of the culture of the Guarani when they mixed with the Chané. The ancient Guarani used to live in the large house or maloca, that is, in gigantic huts sheltering several families. Having emigrated to the foot of the Andes, they kept until well into the 17th century a type of habitation which corresponded to a particular social organization (the large matronal and undivided family). In the 16th century we see them living in huts similar to the ones they still have today, intended to house only one family. In the same way one can witness the disappearance of cannibalism, which in the 18th century is no more than a memory among the Chiriguano. Certain traces of it have survived up to our day.

Thus these pages justify the assertions of the preface. With the Chiriguano we are dealing with a nation of recent formation whose civilization is a composite of Guarani, Arawak and especially Andean elements. The geographic area inhabited by the Chiriguano can be divided into as many diverse zones of acculturation as America has. It has brought about, not the joining of three cultures, but their fusion.

Résumé

The Chiriguano belong to the Tupi-Guarani linguistic family.

They emigrated from Paraguay to the foot of the Andes in the last quarter of the 15th century and the first half of the 16th.

/the cane./

The sad state of decline in which the Chiriguano are at present has put an end to collective work, and it is only rarely that sowing is done in common. Each one must provide for his needs without any assistance other than that of his near relatives.

Fig. 1. Chiriguano hut (ho), temporarily abandoned by its inhabitants, who have gone to work in the fields. Caipipendí. (Photo. A. M.)

The Chiriguano cultivate the following plants:
Corn (avati): 11 varieties;
Beans (kumanda): 11 varieties;
Squash (andai and grindaka-wasu): 5 varieties;
Sweet potatoes (yetí): 6 varieties;
Yucca or sweet manioc (mandio) (Manihot utilisima Pohl);
Groundnuts (maníduvi);
Pimento /peppers/ (ají) (Capsicum), very rarely cultivated;

1: Métraux--150 E-6 (1929) 1930 SF10 Chiriguano SF10

/383 cont./

323 long time with the clay. This paste must have all the impurities removed, which is done in the course of the kneading (Fig. 56).

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Fig. 56. Fabrication of a vessel: the clay, after being mixed with pulverized potsherds, is kneaded. (Photographs taken by the author at Masaví in the Igüembé Valley.)

323 When the potter has obtained an elastic and sticky paste, she molds the base of a vessel, which she puts either on a piece of cloth or a small board. The foundation of the future receptacle looks like a disk raised on its periphery. A

1: Métraux--156 E-5 (1929) 1930 MF10 Chiriguano MF10

/386 cont./

323 The paintings on some vessels produce a particularly successful /387/ effect, thanks to the alternation of brilliant

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Fig. 59. Fabrication of a vessel: the inside surface is polished after being flattened with the hand.

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solid red with black of the same nature. The first of these colors
[386] is taken from the famous roucou, whose oily paste is mixed with resin, kneaded into a loaf, and melted on the hot walls of the vessel.

/389 cont./

415 The plant kingdom hardly inspires Chiriguano artists. The
531 vessel of Plate LII, Fig. 3, is the only one whose decoration is clearly phytomorphic; and again in this case I am not sure that

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Fig. 61. Fabrication of a vessel: the exterior surface is smoothed with a chip of bamboo after being flattened with the hand.

415 a European model did not serve as an intermediary between nature
531 and the picture the potter portrayed.

[126] /390/ Among the 200 vessels I collected in Chiriguano
[179] country there is not one that includes a figuration of the human face, with the exception of the one to which I have alluded, whose form betrays the desire to satisfy the stupid puerility of The TOURISTS.

/433 cont./

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Fig. 88. Chiriguano girls spinning. Masaví (Iguembé Valley). (Photo. A. M.)

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413 moving the front /434/ warp threads back each time they have been crossed with the help of the reed. The woman who has just passed the woof through grasps this dagger firmly and with a sharp blow raises the threads of the warp after pulling on the reed. Difficult jobs, probably the execution of some /Fig. 89 appears here/ complicated figures, are accomplished with a wooden needle, which unfortunately I never saw used.

/468 cont./

412 171 At La Paya, Ambrosetti (6, Fig. 254, p. 484) discovered combs cut out of a small wooden board and some composite combs. Instead of simply recording the coexistence of two different types of combs /Plate LXXXVII appears here/ /469/ in the same place, a very natural phenomenon by reason of the heterogeneous character of the culture of La Paya, Ambrosetti puts forth the strange hypothesis that these combs served for carding wool, without taking the trouble to inquire whether this instrument was known in pre-Columbian times.

303 322 462 412 The making of combs, like all wood carving, is an essentially masculine job.

412 174 The table on Plate LXXXVII indicates my idea of the morphological evolution of the different forms of combs which I have collected.

Chapter XII

Furniture

352 [114] Since the diverse cultural elements which constitute the furniture of the Chiriguano have been completely studied by Nordenskiöld (10, pp. 8-22), I shall limit myself to mentioning them here, insisting only on several details. /Fig. 124 appears here./ /See p. 338./

[342] Let us enter a Chiriguano hut. The door we open is a kind of screen of reeds or a cowhide hardened in the sun. Daylight penetrates the interior through this opening. The only important [513] piece of furniture is a wooden cot (Fig. 125), a kind of bedstead generally occupied by two persons between whom one or two children come /470/ to slip in somehow or other. Nor do the Chiriguano hesitate to sleep on the ground on an oxhide, which they spread out in front of their house. On the upper Pilcomayo, in nearly all the huts one can /Fig. 125 appears here/ /See p. 339./ see one or two hammocks which serve either as seats during the day [286] or as cradles for small children. Their technique, that of the [177] double thread (Doppelfadentechnik), continues an old Guarani

[Text Continues on P. 338]

/470 cont./
352 and Arawak tradition. Some hammocks, not many, are crudely
[286] woven. The threads which /Fig. 126 appears here/ compose
[197] them are of wool; formerly they were doubtless of cotton (Plate XXXVIII).

352 It is a delicate business to persuade a Chiriguano mother to
854 sell you the hammock of her nursling. She fears that an /Plate
754 LXXXVIII appears here/ /471/ evil-intentioned person will profit by the fact that the fabric is impregnated with urine, in order to indulge in magical practices which would make the newborn child die.

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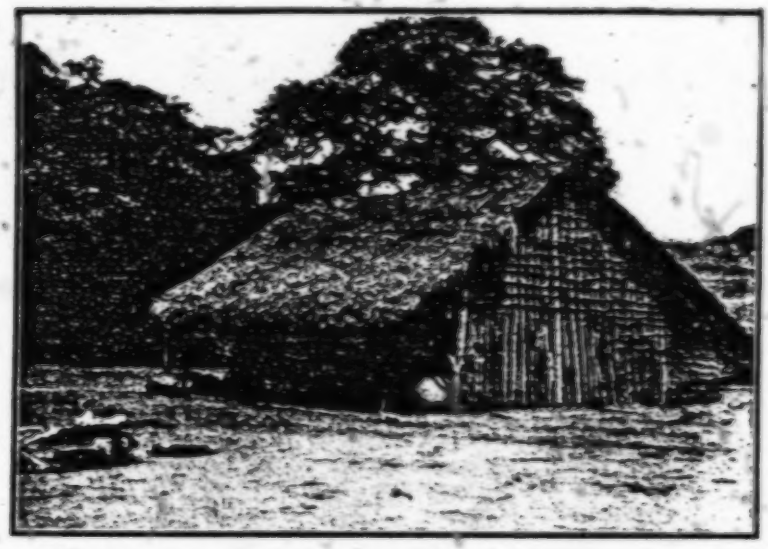

Fig. 124. Chiriguano hut. Saladito (upper Pilcomayo). (Photo. A. M.)

353 Along the walls are lined up vessels of all dimensions
[415] which /Figs. 127 and 128 appear here/ are kept there for the drinking feasts; some contain seed, others serve as linen cup-
[352] boards or provision bags. On the walls, generally in the four corners, hang reed screens or hoops made of palm leaves /Fig. 129 appears here/ which take the place of shelves (Figs. 126 and 129).

[TEXT Continues on P. 342]

2:Métraux E-5 (1929) 1948 SF10 Chiriguano SF10

Chiriguano mortars are of the cylindrical type; the pestle is long and heavy. Maize flour is sifted in round basket sieves very similar to those used in the rest of tropical South America. Meat is boiled or broiled on a spit; the babracot is conspicuously absent. Food is served in clay bowls and more rarely in wooden dishes, and eaten with wooden spoons. Salt is extracted from mines near San Luis, or obtained by evaporating the water of salty brooks.

VILLAGES AND HOUSES

Dwellings.—Until the 17th century, the *Chiriguano* built large communal houses, "150 feet [46 m.] long," in which many families lived together, each occupying the space between two wall posts (Lizárraga, 1909, p. 552). A hundred years later they were lodged, as they are now, in small rectangular houses, with a steep gable roof and wattle-and-daub walls. Sometimes the roof projects in front to form a small veranda. A house belongs either to a single biological family or to two or three closely related families, generally parents with their married children.

The ancient villages were composed of three to five long houses, grouped around the plaza. Modern villages also have a central plaza. A storehouse is built on piles near each dwelling and serves to protect crops against rats and dampness. Like the settlements of their Paraguayan ancestors, some ancient *Chiriguano* villages were protected by a single or double palisade.

Household furniture.—The *Chiriguano* sleep on platform beds of reeds and use their woolen or cotton hammocks to recline on during the day or as cradles for babies. The typical *Chiriguano* hammock is made of long warp threads twined together at set intervals by weft strands; a few caraguatá specimens are made in a net technique. Other items of furniture are benches carved of a single piece of wood, large vessels to store clothes and food, and crude shelves hanging from the roof. A tree trunk with three radiating branches serves as supports for vessels or for piles of corn.

DRESS AND ADORNMENT

Clothing.—*Chiriguano* men, wearing only a G string (chiripá), were a common sight before shirts and pants came into general use. The cotton tunic (cushma), which was adopted from the *Quechua* after the *Chiriguano* migrations, disappeared long ago, but the poncho, a more recent acquisition, is still popular. As early as the 18th century, *Chiriguano* horsemen, in true Spanish style, wore skin breeches and leather coats. They wear sandals when they have to walk over stony ground or through thorny bush.

824 /16 cont./
137
[114] I am going to make a brief list of some trees and plants which I know, without pretending to be a botanist, a subject I have not studied. I shall only say that I have learned it through experience and careful reading; when describing certain plants, I shall also make note of the use made of the bark, root, leaves, and branches of some.

ACACIA BALSAMICA. -- This is the quina-quina, under which name it is known here in Chiriguano country, a tall, straight tree, whose wood is ideal for building because the wood borer does not damage it; it is much used here in the construction of upper roofs, especially for the braches or trusses on which the roof frame is to rest. It is plentiful in Cordillera Province and even in Acero Province.

/17/ ACACIA SAPONARIA. -- This tree is large and its
[342] wood light, perhaps even lighter than cedar, but it is of less
[492] value; it is whitish and much used for making doors and windows, but the main use to which said wood is put is in saddleries to
[296] make pads for saddles. The seeds are similar to monkey ears
[515] and are good for washing clothes and to keep the skin of the face free of blemishes; here it is known by the name "timboy."

ACACIA AMARILLA /A. moniliformi/. -- It is a medium-sized tree of rather lightweight hardwood, for which reason drawers or wash basins and yokes for oxen are made with it.
[372] It is no good for making fire, because it smells when it burns from which it gets the Chiriguano name "Tatane," fire that smells; the wood is yellow.

ACACIA ASTRINGENTE. -- There are many groves of
[342] trees of this class here and there; it is the most abundant tree,
[281] the wood is good for small joists because the wood borer does not eat it; the bark contains much tannin, and it is the wood most used for tanning hides by both Indians and whites; the latter call it sebil and the former "Curupau."

245 ACHIOTE. BIXA ORELLANA. -- This is cultivated in
137 fields and gardens, grows to a height of two and a half meters,
824 its leaves are dark green; it produces abundant fruit in a sort of pod covered with bristles and filled inside with fiery red seeds, which are what makes the little tree highly valued. They
[302] serve as food coloring, and the Chiriguano paint their faces
[303]
[439]

/17 cont./
245 137 824 [302] [303] [439]
and feet with them, as will be seen; for this last purpose it is prepared beforehand, many pods being boiled in an olla, and pastes of every size are made from the decoction, depending on the value that they wish them to have; it is traded by Chiriguanos and whites.

137 824
The Bixa orellana, or "Urucu," as the Indians call it, is a plant of high value for the Chiriguano; he will travel far to obtain a small amount in the towns or places where it is prepared.

ALGARROBO. -- The place where this extraordinarily large tree abounds is in the pampas; thus in the plain of "Curuyuqui" of Yvu Mission, Isoso, Parapiti, and the Gran Chaco it is found forming forests. It is very bulky and has [342] [415] long branches which on some touch the ground; its trunk is thick and not always erect, the wood is excellent, similar to oak in spite of being dark, and it is much used for making tuns, door and window casings, and even for barrels. In [262] [273] Chiriguano this tree is called /18/ "Ivopei," and the "Ivope" pod is long, compressed, and yellow; when it is ripe, it is sweet and much sought after by livestock and by the Chiriguano; it is their food and drink in times of scarcity as well as other times, and the mead that they make is extremely intoxicating. On the bank of the Pilcomayo even the whites eat this pod; the Toba, Choroti, Mataco, and others hold their orgies when the algarrobo ripens.

ALGARROBO CHICO. -- This is a smaller tree than the previous one, even its fruit is smaller, speckled in color, and sweeter than the true algarrobo, but not as abundant as the [262] first. As the pods are small and the seeds within abundant, it is not highly thought of among the Chiriguano; they only eat it out of necessity or as a tidbit; the wood is not valued very highly because undoubtedly there are others that are better. In Chiriguano it is called "Ivope rai."

ALGARROBO AGRIO. -- This is also small, and it is called [262] "sour" because the flavor of the pods really is sour. In times of scarcity it is also food for the Chiriguano; the pods are small, and the tree has its congenial sites. The Chiriguano Indians call it "Ivopetayi."

/19 cont./

137 824 [759] in dry places; when dampness penetrates it, it is destroyed in a few years, as experience has shown. The bark that is found under the first layer is split, washed in tepid water, and left to steep overnight; it cures intermittent fever. The Argentinians call it cacha, the whites quebracho, and the Chiriguano "Iguīraro."

AZUFAIFO /jujube tree/. -- This is abundant hereabouts [262] and is a tree of medium size. Its wood is not valued very highly, but the fruit, the size of a grape seed and of a dark coffee color, is a great resource in times of scarcity for the poor Chiriguano. It ripens in January and February and is liked even by cattle and by sheep and pigs. The whites call it mistol and the Chiriguano "Yuá."

245 BANANA TREE. -- Cultivated in orchards and well fenced-in fields, it forms a grove, and each plant yields or produces a cluster, very large on some of them. When the ripe cluster is removed, the plant that produced it must be cut in order that the others may produce their own. There are several [262] varieties, large and small, the latter very sweet and eaten as fruit, and the former only when boiled and roasted; the whites call them plátano, and the Chiriguano "Pacoba."

137 824 [271] BIGONIA ACUOSA. -- This is a tiny little bush one vara in height, which under the ground has a large root like a watermelon and even larger; it contains much pulp which, when squeezed, yields potable water and is used for it in times of scarcity. The Chiriguano call it "Sipoi."

[342] CATALPA. -- This is a large tree and fairly strong. Its wood is used in the construction of houses. The color of the /20/ wood is dark, but when it is newly cut it is somewhat [515] green. Its flowers are purple, and the Chiriguano chew them to whiten their teeth; they are bitter and because of this the tree is called "Tayi," or bitter, in Chiriguano, the whites call it lapacho.

CEIBA. -- A large tree with deformed trunk, and furnished with sharp points, broad leaves, and large, white flowers which produce a material similar to cotton without fibers, for which reason it is smoother and shinier; it is used for mattresses [322] and pillows and candle wicks. The wood is spongy and not at [415] all hard; from it are made troughs to hold water from year to year and in this way they are not soon damaged. Its ashes

/21 cont./

137 824 MARA or CAOBA /mahogany/. -- This tree is found in all sections. It is a strong wood, but the white part at the sides is subject to decay. It is rather heavy and hard and is only used for door and window casings and even for tables. The leaves are permanent, but not too good for shade. If the leaves are touched with some force in order to pick them, they cause a skin eruption which disappears only when treated with bees' honey; I cured myself this way twice.

[342] [352] [757]

137 /22/ MELOCOTÓN /peach tree/. -- This tree, native to Persia, is quite productive in this region, but its fruit, severely attacked by the black butterfly, does not reach maturity because it always has worms. The apple tree grows in high places and where the atmosphere is not so hot, but both of these are orchard trees, not native ones, having been imported by the whites, who cultivate them, which can also be said of the quince tree.

137 824 MOLLE. -- This tree is not found in the central part of the region and thus is not native here, being obtained only by cultivation. The whites and the Missionaries have introduced it into the towns with good results. It is found in abundance in the district under the jurisdiction of Padilla; it has permanent leaves, which are medicinal, as is the resin which comes from the trunk; a cooling beverage, pleasant and similar to wine, except that its odor is somewhat disagreeable, is made from the seeds. The eucalyptus is another tree which thrives regularly here, but it has also been imported; its leaves, also permanent, are very good medicine for the endemic fevers; its trunk is an excellent wood. Neither tree has a name in Chiriguano, from which it can be deduced that they have been imported, like the grape vine, the common fig tree, the peach, quince, etc.

[757] [2073] [757]

MORA OR MORERA /mulberry/. -- This tree is found wild from the left bank of the Parapiti River in Cordillera Province. It rises to a height of some 15 meters, is bulky with a very leafy top, and the fruit is smaller than that of the cultivated mulberry; the wood is solid and compact like that of the soto and has even better qualities; it is used for machines for milling sugar cane, plantations of which are common from the banks of the Parapiti River, where sugar of the highest quality

/23 cont./ some. Trees[A] are covered with long
[139] sharp points and others are not, only having an occasional im-
[824] perceptible sharp point; the fruit of both is pleasant and serves
[439] for gifts and trade for the Indian, who sells it to the whites,
[431] the ones who, rushing to get rich more quickly and easily, are
[648] little concerned about the nopal and the fig tree. In Chiriguano
it is called "Saini."

PALM or PALMER. -- The palm tree has congenial places, where immense forests are formed and sometimes grow all around a lake like a great garland; it is a very tall and smooth tree without a single branch. Its leaves are in the form of a
[436] fan and are used to make hats and for sieves, which are sold
[342] for 30 or 40 centavos apiece. The wood is good for joists in houses, and it is also split into shingles for roofs and is quite durable, if the precaution is taken of cutting them after the full moon. In Chiriguano it is called "Carandai," and the place which they occupy, "Carandaiti," palm grove.

PALMA CHRISTI. -- A not very durable plant, it grows to a height of four meters, has a soft, hollow trunk, large leaves, /24/ and flowers in the form of a bunch of grapes. The seeds are found inside little burrs, like chestnuts; said burrs in some plants open by themselves in the warmth of the sun, while others must be opened or carefully broken with a little hammer or a stone. The name indicates that it is a beautiful plant, but this beauty is in the broad, abundant petiolate leaves. There are several types with reference to
[757] size and quality of seeds; I know five kinds. Castor oil is
[302] extracted from this plant or from its seeds for use as medicine; we use it in the missions to fuel the lamp of the Blessed Sacrament, and the Chiriguanos mix it with "Achiote" seeds and put the resulting cosmetic on their faces and on their calves down to the feet. In Chiriguano the plant is called "Causiro," and the oil, "Yandi." Even the leaves of the
[759] palma Christi are medicinal, some being hot and others cool; thus when headache is a result of overexposure to the sun, the leaves of the white spurge are applied; if, on the other hand, it is the result of high humidity, the leaves of the red spurge are applied. The seeds of the dark purple spurge are very small, but contain more oil than others.

[A] [i.e., nopal trees, -Ed.]

/25 cont./

137 824 forth bittersweet and very good. These are ash-colored and pearly and very highly regarded by Chiriguano and whites. The blossom of the passion flower is purple, forming a garland like a crown of thorns; it has its calyx, five petals and three pistils, for which reason it is called passion flower, and it is certainly worthy of admiration. The Indians call it "Murucuya."

PIÑON. -- A euphorbiaceous plant, this little tree exists [177] in a cultivated state and was introduced into this Chiriguano region by the white Christians. It grows in orchards and elsewhere, and its maximum height is three meters. Its small [757] trunk is slender and top heavy, and its fruit consists of black seeds which are not edible but which, when ground and diluted in water, make a powerful purgative and therefore must be used with great care, because they can cause death.

137 SAUCE /willow/. -- It grows and develops on the banks and in the bed of torrents, as well as on the shores of streams, which shows that it seeks damp places, but from these places • [342] the force of a flood often uproots it. The common willow has no special qualities; only its branches are useful in the building of houses because they are flexible, fibrous, and not heavy; little use is made of the trunk. It is a tall, large tree with very tiny leaves. In addition to the common willow there is also the weeping willow, whose branches touch the ground; it is neither native nor found wild; some whites plant it to beautify their interior patios. In Chiriguano the common willow is called "Igüirapucu."

SAÚCO /elder/. -- It is not found everywhere, only being found along streams with little water which are in the wood. It grows to four meters in height, its trunk is slender and soft, its branches have a pith which is easily extracted, and its white flowers in the shape of a parasol are sudorific. The whites do a good deal of searching for this flower /26/ for their illnesses. Even the leaves are medicinal; when drunk in a decoction they are a good purge. What a pity that it is found in such limited areas!

/26 cont./

137 824 SOTO. -- This gigantic tree is found everywhere from the province of Tomina, but there are places where it is more abundant. In the spring, when the budding begins, its leaves are red, and later they turn green. In the autumn its fruit, which the parrots like, are red and are in bunches like cherries. Seen from a distance by a European, he thinks they are cherries. The wood of the soto is strong and does not rot; in dampness or in water it is better than iron, since it does not deteriorate. [342] It is very widely used in the construction of houses, especially when they are of frame construction. A great deal of tannin, which the Europeans use in tanneries, is extracted from the soto. It is called palo cuchi by the whites here and "Urundei" by the Chiriguano.

249 TOBACCO. -- An annual plant which flourishes everywhere, but only the whites cultivate it on a large scale, especially in Sapirangui and Chiquiacá, whose products have some fame. Even an occasional Indian cultivates it for his own use and to give to his friends. There is another similar plant, and, when he lacks real tobacco, the Indian deceives himself with its leaves. The true tobacco is called "peenti" in Chiriguano, and the other "huacapeenti," which, literally explained, means "cow tobacco." 276 In Bolivia there is considerable consumption of tobacco wrapped in paper or maize husks; rarely does one see cigars of pure tobacco, like the Havanas and others; the Chiriguano smokes a lot and acquires the habit at a tender age. [897] Children of four years of age have already begun to smoke; [562] women also smoke.

139 824 [435] TACUARA. -- In the past when there were no cattle, the tacuara, or hollow cane, was very abundant; vestiges still remain of some immense canebrakes, but the plant has been reduced almost to the cultivated one, with the result that what was previously found in the forest at the disposal of the first occupant is found today in the possession of private parties, and anyone who is planning to build a dwelling must pay for hollow cane at the rate of 80 centavos per hundred, and the worst of it is that it is not found everywhere. This lack is made up for by small rods from trees, but these are neither as light nor always

/27 cont./

which is purple when mature and opens into three sections when ripe. It has an insipid sweetness, but one which both whites and Chiriguano like. The color is a bright purple. It is abundant, and in certain years of scarcity it is a resource for human life in the months of February and March. In Chiriguano it is called "Ñacagüina." The caraparí is another cactus, taller than the preceding ones, which also has its congenial land. /28/ since it is not found everywhere. It is admirable for its tall, striated leaves or branches, ash-gray and armed with spines; its fruit is very pleasant and also sought by foxes. The trunk is soft like that of all cacti; nevertheless doors are made of this wood and are durable enough. The pulp of the trunk is used medicinally to cure liver ailments, etc. They say that it is even good for goiter. There is another species of cactus which grows to some 20 or 25 centimeters; it is round and thick, striated and armed with spines. In Chiriguano it is called "Zipepe." The children, as we shall see, make wheels by cutting off its spines, and, making it roll, they use it as targets for their arrows. Finally, there is another which is trailing and long, covering the ground where it grows and making the place impenetrable. This has and produces a very delicious fruit which is called "Tapiacaru" in Chiriguano.

TILANDSIA. -- This plant is known to the Chiriguano by the name of "Caraguata guasu." Its special place is the hills, and among them it has some more congenial to it; it grows well enough, and its leaves are extraordinarily broad and long and ash-gray in color; in the middle there is a thick stalk which rises quite high and is good wood for house rafters; from the crushed leaves they make cord and from these are made first-rate halters for tying up animals in the rainy season. The Toba and even the Chiriguano make a kind of net which they call chipa or "añapoca," which is very useful, inasmuch as the women can carry any weight in a bag of that kind; from the same they make nets so as to be able to fish in the rivers, and these are pieces of work which would attract attention in any part of the Old World.

/30 cont./

137 824 27 YERBA DEL DIABLO. -- This is the datura which is so abundant in the countryside and fields and which is a real plague. It rises to one meter in height, has branches, broad leaves, white flowers, and fruit armed with spines which, when dry, are enough to draw blood. The leaves and seeds make one lose one's memory. In this respect I remember one incident when an Indian woman absent-mindedly or out of ignorance covered an olla of hot food with datura leaves; half an hour later she ate it and it gave her a bad headache and a short spell of vertigo. Her little granddaughter, a schoolgirl about six years old, ate some also, and she suffered a complete loss of memory and all her actions were those of a demented person, a state which lasted some 24 hours. It seems that the Chiriguano [159] do not know that this plant and its seeds and leaves are poisonous; the latter, dried, are medicinal, alleviate the effects of asthma, and are prescribed for asthmatic Indians. Christians know it by the name of chamico, and the Indians by that of "caaza," that is, painful herb.

137 824 SAPALLO /squash/. -- There are eleven species of this creeping plant, which I shall discuss in another chapter, only adding that watermelon and melon also grow here, as well as the cucumber and the beet. The "curugua" and the "curuguami" [262] of the Chiriguano are plants which are similar to the sapallo, but they climb trees and produce there an oblong, sweet, and fragrant fruit; when one enters a house, it is immediately evident if there are curugua fruits there; they are edible both green and ripe, but they are preferable in the ripe state.

I shall forgo describing many trees and plants whose [342] medicinal virtues are known; I shall take up others when dealing with medicines; however, before I forget it, I shall note here at the end of the flora that a region where /31/ there are damp places abounds in secular cedars, whose wood is used in carpentry for doors, windows, tables, etc. So that it may not be subject to rot, it is necesary to get mature plants whose color is light red; the whitish one is attacked by the wood borer; the odor of the wood is narcotic, and this property keeps away insects; its odor is similar to that of the cedar of Lebanon, and for this reason the conquistadors gave the name of cedar to this tree which the Chiriguano call "Igüirane," or stinking stick.

4: Nino--230 M-3 (1893-1911) 1912 SF10 Chiriguano SF10

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361

Chiriguano Town

/169 cont./

In both cases the ranchos which had been formed were left destroyed, despite the fact that the latter, because they had been built under the direction of the missionary, were quite comfortable, new, and /170/ well covered with red straw /paja colorada/, which is the best for the construction of ranchos.

The Chiriguano Indian does not do this. He also on occasion suffers from a scarcity of supplies, because the land on which he lives produces harvests only when there is no lack of rain. In times of scarcity he bars the door of his house with poles or thorns, temporarily leaves his town, and goes off to distant lands in search of food, gets it, and brings it to his home, but he does not emigrate en masse, nor does he build temporary huts in a foreign place or town, and if he has any relatives in the places where there is abundant food, he seeks them out and is welcomed and well treated by them. He remains there for weeks and even months, until his fellows are tired of him, and then he takes his leave, taking the little food that is offered to him as something precious, and in fact it is in times of hunger.

Chiriguano towns are small, consisting of a few houses, most of them not exceeding 20 or 30 houses; these are large and in each one there are up to three families, but close relatives, such as father and married son and married daughter; they form a square and are so situated as to enclose the little plaza. They are not pretty, but they are clean; they are not large, but neither are they as small as those of some towns of the whites. These Chiriguano towns are poor; it is hard to find in them houses with tiles, but they are comfortable, with the roofs, as will be said, having the necessary slope so that they do not readily admit drips (1).

1. In the upper part of the house they make a long, continuous opening to allow the smoke to escape; it is made in such a way that it does not allow water to come in during the rainy season.

/170 cont./

Modern Houses

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[464
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A Chiriguano house offers nothing special in appearance, but even those of the mestizos who have settled in their country are of the same form and not rarely worse, because naturally since the mestizo is not very fond of physical labor, because he is not an Indian, it is necessary for him to call on the energy of the latter, and the native is not always inclined to lend him this or that service, from which it follows that their houses are inferior (2). /Illustration appears here./

2. I am speaking here of the houses that the mestizos or whites build in the countryside where they live; in the towns their houses are normal; they almost all have tile roofs, and there are also some which are white-washed.

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/171/ House in the Chiriguano language is called Ho, which is different from what they call Tapi, but. The latter are common in large towns and belong to the lazy people, wanderers, and even the poor. It must then be understood that the construction of a Chiriguano house is a work of no small importance and care, if one considers that the Chiriguano is poor, so poor that he only has available an ax, a shovel, and a knife, and not always these. Because of the importance that I give to this construction, many who do not know these regions could believe that the houses are very fine, but there is nothing fine about them. None of them is beyond the rank of cabins.

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I believe that it is indispensable to describe the way of constructing them and the elements available to the Chiriguano in order to carry this out. If the Indian has some luck in sheep, he pays some of his companions with sheep so that they will help him gather the principal timber, and should this wealth be lacking, he begins to cut and strip bark in the woods by himself, selecting timber of good quality, straight and resistant to the action of water. The principal pieces are generally six posts

[Text Continues on P. 235]

4: Klan--Z54 M-3 (1889-1911) 1912 SF10 Chirigsano SF10

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Partial View of Modern Chirigsano House

/171 cont./

which form the skeleton of the house, but where the forest is not tall and the trees slender, nine are needed.

Once the timber has been transported with the help of his companions and relatives and they have been treated with food and chicha, the day for setting up the house is set. The center posts are first placed, with the two holes being dug quite deep; next comes the placement of the four or six lateral ones, which are much shorter so that rain will not stay on the roof and there will not be continual and copious dripping. I measured several relatively new houses, and their pitch from the ground to the ridgepole is about 45 o/o in some, and in others 30, it being possible to conclude that the average is 40 (1).

1. Chiriguano houses are rectangular with only one room, which, if it is very long, has in the middle another post which holds up the ridgepole so that it may not bend or break.

[198] This proportion is maintained today by the houses in Chiriguano towns, and it cannot be otherwise, because the roof is entirely of straw and the rain would stay on it if it did not have sufficient slope. Some who by mistake build them without this proportion realize at the time of the first torrential rains, and even more in the ones that follow, the mistake that they have made, but in vain, because /172/ it is very difficult for the Indian to correct his lack of foresight.

Once the skeleton of the house has been set up vertically, the rest is simpler to do, except for the placement of the ridgepole and the side beams; the latter can be cut in half to make it easier to move them, in addition to making finding them easier. The placement of these beams is followed by that of the rafters and the reinforcing pieces of wood to strengthen the walls. The rafters are tied with bejuco or with spiny caiba bark, [204] which is called tamon by the Indians and Toborochi by the whites.

/172 cont./

342 824 The hardest part is finished with the previous operation; a short rest is taken, and then the owner of the new building must obtain enough hollow cane, engaging for this purpose Indians who have horses. But if the cane is very far away and has owners to boot, he gathers long sticks of astringent acacia or sebil and puts them horizontally every 15 centimeters on top of the rafters with the same above-mentioned lianas. Some [283] people, to tie the cane or sticks, use thin cords made from cowhide, but this, in addition to being more expensive, is less durable than bejuco (1).

[137] [178] [423]

1. Before the whites settled in Chiriguano country, hollow cane was abundant and had no owners; at the present time it cannot be found, and, if there is any, it is in private hands and must be bought.

Generally, before the walls are begun the house is covered with capíi, red straw, or, should this not be available, with capiáncua, straw for harnesses of beasts of burden, which is of inferior quality and very soon frays to pieces with the rain, sun, and strong winds, while the capíi may last for more than ten years.

[476] If it can be obtained by staying for a few days in a place where it is plentiful, he pulls it up there and reduces it to rather large handfuls; the gathering is done in several days, engaging Indians who own horses. When the material is in the town, he rests for a few days or weeks; he informs or invites those who wish to take part, in particular those who are closest to him by [354] kinship or friendship. These then go about tying the capíi between two horizontal canes toward the side of the roots, forming long, narrow lines, and when they are so placed, they attach them horizontally, beginning at the bottom and working /173/ upward or toward the ridgepole, where they leave a large vent to let out the eternal smoke of their inextinguishable fires (1).

1. Now the red straw is disappearing almost completely; the destruction of this necessary

/173 cont./

342
824 element and that of the hollow cane are due to the abundance of cattle, which destroy even the straw for harnesses.

342
574 When the placement of the roof has been completed, they all come down and gather in the hut of the friend, who, as a
[476] reward or payment for the service rendered, offers them a cup
[831] of chicha, and they drink this amidst jokes and crudities, at times very heavy, especially should maidens or women of 30 years or older who do not keep quiet pass by. But as the people know each other well and are friends, the greatest harmony reigns, and, when everything is finished, they take leave of the owner, thanking him for his gifts, and he shows them his gratitude for the services which they have rendered (2).

2. The workers only ask for chicha in recompense, but if the owner has beans or gourds cooked for them in a stew with considerable stimulant in the form of chili pepper, arivivi, it is a feast or carnival for all.

342
312 The rest of the work is done with less haste and at a more
[221] opportune time. In fact, most wait until the rainy season to do it, for then water is abundant, and this to be sure deserves the approbation of all because it is more economical and easier. Thus, taking into consideration the laziness of the Indian man
[46] and the tasks which the Chiriguano woman has, it would be expensive and quite tiresome to bring the water on their shoulders from great distances, which is avoided during the rainy season.
[356] Then during each shower not only is the construction of the walls of the new houses done, but also the repair of those which have come apart during the year, and it is very amusing to see from a distance the women around the houses with their sleeves rolled up or with the tipoy down to the waist, making holes in the wet ground with shovel or hoe, pouring a little water in, kneading the earth, forming large balls of it, and putting it between the canes which are already attached.

/173 cont./

342 The canes, or sticks, are attached in the same way as in the roof, with the difference that for the walls they are put in double order, outside and inside, so that they can serve as a support for the dampened earth, which in the end is like a large bag, long and tall, around the house. This other work [462] is done by the Indian men, engaged beforehand by the promise of chicha; next they too dig in the wet soil /174/ dampened by the rain or by water, and help the women in the operation of forming the walls.

With such simplicity, the four walls are raised in a single day, everything being completed; at the present time almost all houses have a gallery where the men and women always sit to enjoy the cool of the mornings and the evenings in friendly gatherings, a gallery which is even used for sleeping on excessively hot nights, especially when inside there is an abundance of vinchucas and other insects (1).

346
476 1. In Parapiti a school for 150 girls was built and finished in 12 hours; nothing had been prepared for this building; it was planned the day before and done at once by all the inhabitants.

342 With the erection of the gallery, the house is completely finished, and the Indian content and satisfied. In present-day buildings care is taken to place the door, or entry, at one end of the house which corresponds to the gallery, and many have two, one in front of the other, in order to have a way to the patio which they make with a fence of thorns for greater comfort.

347
28 The doors are of cane, which they tie together like mats, but vertically, with ceiba bark or with cowhide thongs, which [322] are more durable indoors. If an Indian can get a cowhide, [824] he makes a door of Guayapa wood, or, as the whites call it, zacharrosa, or another soft wood, which he puts in a hole left in the construction; he makes another frame with its hinges made of the same wood, soaks the hide, and fastens it in this

/174 cont./

342 281 second frame, taking care that it is not very tight so that when it dries it will not warp. He attaches this hide from behind with thongs of the same material, and the result for them is a door de luxe, which could be envied even by some whites, who, in spite of the fact that they have hides, either cannot find anyone to work them for such a door, or who out of avarice and in order not to spend a few coins do not concern themselves with such a comfort (2).

342 322

2. Some of them make very crude doors with two pieces of thorny ceiba wood, which they work perfectly with a knife. No Chiriguano puts a window in his house.

Ancient Houses

342 177 178 Some of my readers perhaps may have believed that the house and its mode of construction just described go back to the origin of the race. /175/ This belief would be an error, because they must understand that the above-mentioned is the result of progress. The method of building houses like the present ones is relatively new; they learned it from the whites, especially from the inhabitants of the Santa Cruz area, where the houses all have galleries, this being noted even in the capital of the department, although they may be of much more importance and may be disappearing in the new buildings. But 184 in Monteagudo, Lagunillas, Charagua, and centers where the Chiriguano have their holdings, houses have gallaries.

These, in addition to giving the houses a better appearance, in addition to the indisputable utility, are a very great reinforcement and protection for the walls of the house, not allowing the torrential rains to wear away or demolish the plastering that 342 171 they do in all the houses. It is true that many houses of the whites in their towns are of adobe, but when the timber is of superior quality it is almost preferable, because this material + REMAINS JOINED BETTER AND IS MORE COMPACT.

000 /175 cont./
remains joined better and is more compact (1).

197 1. When a mission is founded, the first building is the mission house made in the usual way. But in the Potosí missions they are all of timber, and any traveler would marvel at their height and strength.

342 178 The ancient Chiriguano houses were of different form, and they were not alike in size or beauty in the towns. Some were distinguished by their roundness and conical form, and others because they were small and low. The latter had no importance at all and could scarcely even be called huts, in spite of the fact that, to the poor Chiriguano, dominated by his laziness, the smallness of a dwelling does not detract from its importance.

342 171 I am going to deal at some length with the way the houses of conical form were built, because they indicate skill on the part of the builder or because they make one's imagination take wing and fly to China, Africa, and Japan, where similar forms are found and thus make us ever more convinced of the unity of the human race.

As explorers, travelers, histories, and well thought out books say and as is also observed in the pictures of illustrated geographies, it is evident that in China, Japan, Africa, New Zealand, and in the east of Australia not a few of the inhabitants /176/ have houses in conical form.

This form seems to be the original one of the human race, and it is very probable that man has used it in the five parts of the world, since it is even found among the Chiriguano.

342 335 In fact, in order to construct a comfortable house before the Conquest, the clever Chiriguano used the following method. He first obtained a single post of some four or five meters and planted it at a depth of approximately one meter (1).

[476] [574] 1. For any small job for which the Indian must trouble his friends, he would get nothing without offering them a drink. Not even money is so esteemed and appreciated as chicha by the Chiriguano.

/176 cont./

342
335 The post thus set up served as a central point for the new house; next he traced a more or less round circle without having any recourse whatsoever to the rules of theoretical geometry, being ignorant of its existence; nevertheless, his reason helped him enough. Having traced the circle and having secured ahead of time enough forked poles /horquillas/ some two meters high, he put them in holes some 50 or 60 centimeters deep around the circumference, leaving the entrance facing the plaza.

Once these poles have been well fixed in the ground around the center pole, the Indian, with the help of his companions and relatives, prepares rafters, straw, bejuco or ceiba bark, hollow cane or small sticks. He then begins, after an appropriate period of rest, to put in place first the rafters, tying them to each other, the center post serving as a prop, and then he ties them to the poles around the circumference, one to each pole, until he finishes. Before beginning, the precaution is taken of singeing the bejuco. The rest is done as has been described in the modern houses, but when the placing of the roof and the walls around are finished, the center post, which would only be an obstruction for the fire which is constantly burning in the center of the house, is removed (2).

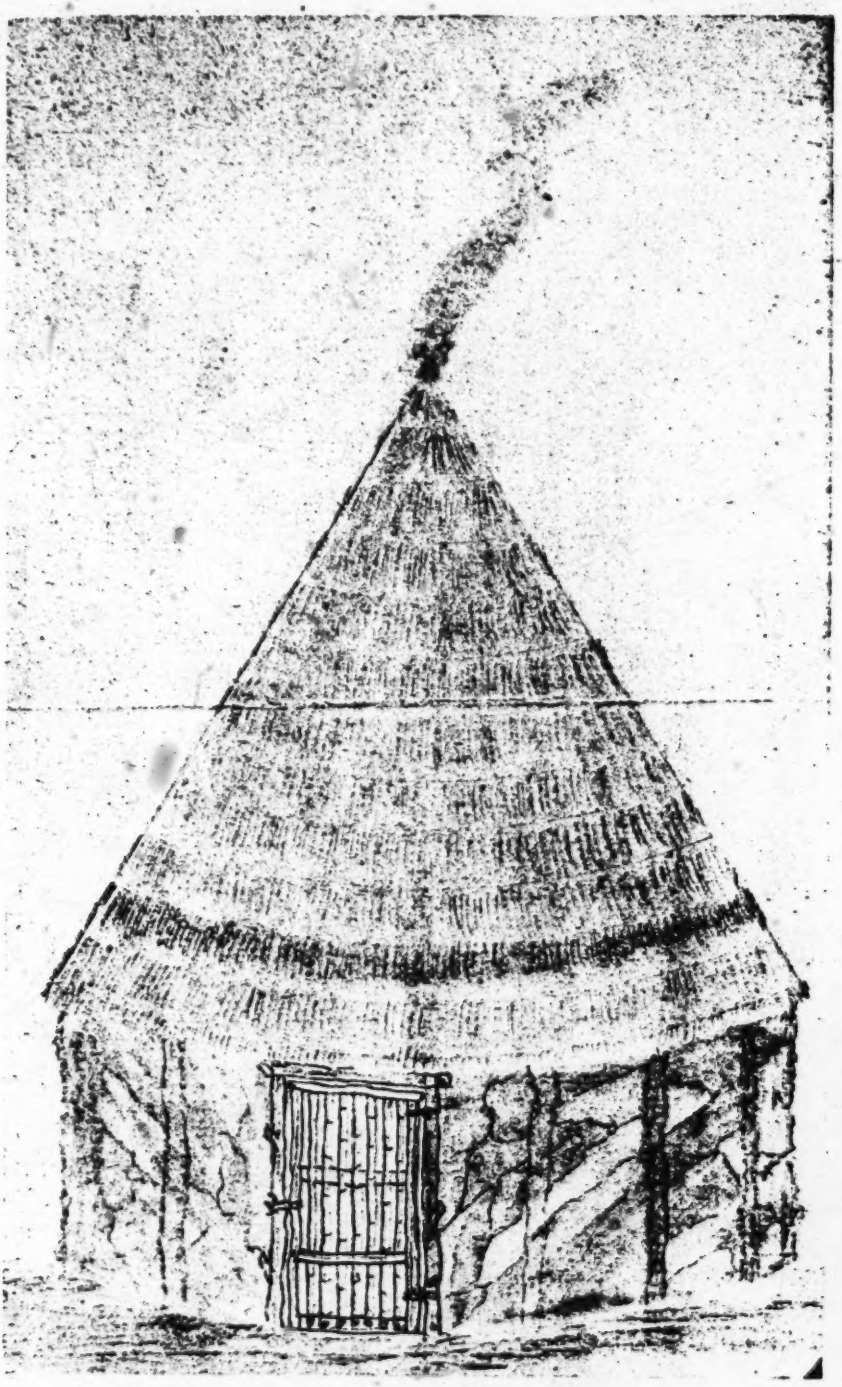
[824] 2. Singed bejuco does not rot, regardless of the season in which it has been pulled up. It is resistant and is not attacked by the wood borer. Those who use it so much have experience.

[821] Everyone knows that conical houses are very solid, when care is taken to select good wood and /illustration appears here/ /177/ to cut it during the waning moon. If the rafters have the fork downward, conical houses are much more solid (1).

[554] 1. A house in conical form among the ancient Chiriguano indicated great ability on the part of the builder and status on the part of its owner; for this reason they were owned only by caciques, rich persons, and other important persons.

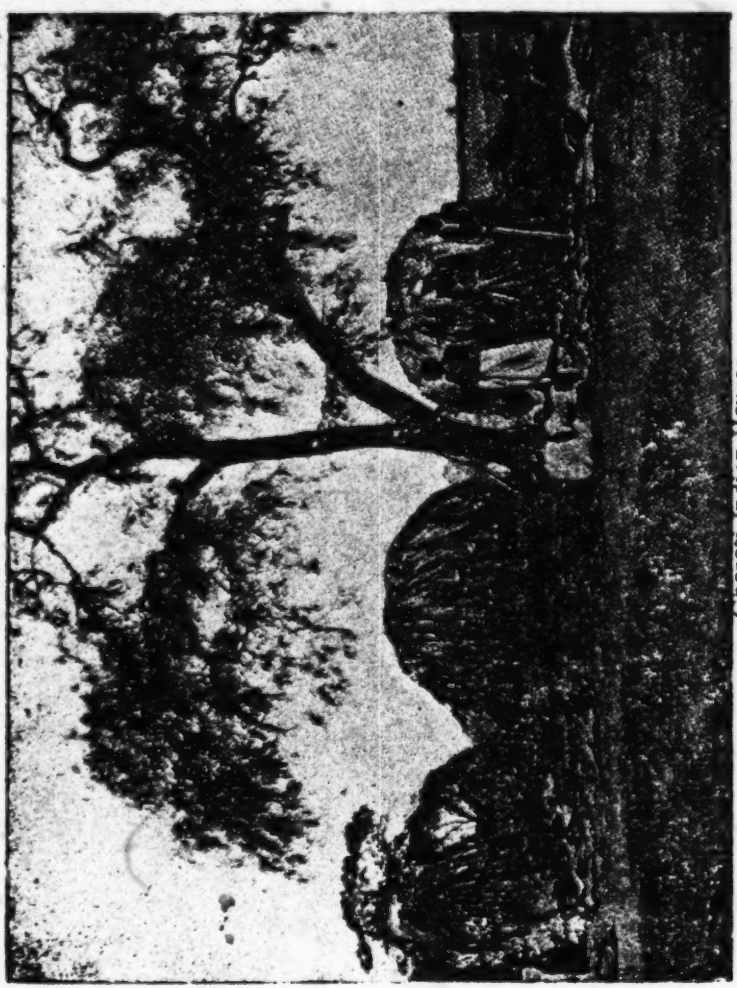
4: Nino--242 M-3 (1893-1911) 1912 SF10 Chiriguano SF10

• 342



4: Nino--392 M-3 (1893-1911) 1912 SF10 Chiriguano
Choroti SK6

342
351
361



Choroh Indian Houses

5:Nordenskiöld E-5 H (1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8
[P 1]
C
343

Fig. 1. Maize-barn.
Chiriguano.

I.

Dwellings.

C
Ce
361

Like all other Indians I visited south of Sta Cruz de la Sierra in Bolivia, the Chiriguano and Chané live in villages. Some of these villages are rather large and inhabited by several hundred people. Frequently a number of villages are situated quite close to each other. As a rule, the huts stand around an open space which is sometimes planted with trees to give shelter. These »squares» serve as meeting-places and playgrounds.

C
Ce
342

The huts are square. They are built of reeds or wooden laths, and thatched with grass. They are very often plastered with earth.

C
Ce
[592]
[361]

There are no huts here of the original Indian shape. The real Chiriguano (Chané?) huts were very large; as many as a hundred people lived in the same house, the whole

S:Nordenskiöld E-5,4(1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

village consisting of only a few big huts.[1]) These plainly correspond to the great family-houses known to us from Brazil, but which in Bolivia I have only seen among the Chacobo, a Pano tribe on the Lago Rojo-Aguado. CHOMÉ[2]) gives no exact information about the huts. He says they stood in a circle around an open place. In the middle of the square there was a special hut for strangers. According to NIXO[3]) the Chiriguano formerly had round houses. He gives a rather lengthy description of these, but does not tell us the source of his information. NIXO describes at length how the Chiriguano now build their houses.

As early as the time of VIEDMA[4]) — end of the 18th century — they seem to have forsaken their original type of house and built themselves smaller huts. Since the dwelling-houses here retain no traces of their original shape, it is useless to make comparisons with other Indian huts. There is hardly anything in Indian culture which so quickly changes under the influence of the Whites as the houses. The acquisition of iron tools makes it possible to put up quickly properly built houses. An Indian tribe need consequently not have been long in contact with the Whites before they alter the style of their huts. This is not the case, to be sure, with all the tribes, for many, such as those in the interior of the Chaco, tenaciously preserve the primitive type of hut which, though small and inconvenient, affords greater protection from cold than the roomier dwellings of the Whites.

It would be of interest to find out in what measure

[1]) Annua de la Compañia de Jesús — Tucuman y Perú — 1596. »El mayor de los pueblos es de cinco casas; lo común es de tres; mas son muy largas, de más de 150 pasos, á dos aguas, con estantes en el medio sobre que se arma la cumbrera, y de estante á estante vive una parentela.» LIZÁRRAGA P. 552.

[2]) P. 313. »Pendant ce temps-là, je n'avais pas d'autre logement que le toit de paille qui étoit au milieu de la place.»

[3]) P. 174.

[4]) P. 181. »Sus casas son unos pequeños ranchos hechos de caña.»

5:Nordenskiöld E-5,4 (1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

the earth-plastering of huts is here an original Indian idea. I have attempted to indicate on a map the distribution of huts with earth-plastered walls, but I refrain from publishing it because, in the majority of cases, I cannot ascertain whether the Indians learned from the Whites to plaster their huts. Huts with earth-plastered walls are found among the Indians around Roraima in Guiana[1]) and among the Ijca[2]) in Columbia. The Indians at Mojos[3]) used to have such huts, and OUTES[4]) mentions them from the Cainguá etc. Earth-plastered mestizo huts are also common in the Mizque valley in Bolivia.

The Chané on the Rio Itiyuro, but not those on the Rio Parapiti, and the Chiriguano have maize-barns on piles.[5]) Occasionally the barn and dwelling-house are combined in such wise that the people live on the ground-floor and store their maize on the floor above. During my travels I have only seen barns on piles among the Mataco-Guisnay (one only), Mataco Vejos, and the Chacobo (one only). Some Quichua huts between the Rio Chapáre and Cochabamba are built on piles. I scarcely think these are original, however.

JOHANNES LEHMANN has written a treatise on pile-buildings all over the world. He mentions there their occurrence among several tribes in northern S. America, which are shown on the map below. The village on piles from La Plata mentioned by LEHMANN after HEIERLI is, of course, not Indian; nor are the barns from the Argentine

[1]) THULIN.

[2]) BOLINDER (4), P. 35.

[3]) MARBAN P. 133; CASTILLO, P. 318.

[4]) OUTES Y BRUCH (5) P. 93.

[5]) Already LIZÁRRAGA (P. 609) speaks of the maize-barns of the Chiriguano: »No dormian en el buhio, sino fuera, las espaldas seguras con unas piruas de maiz juncto al buhio (pirua es un cercado como de dos varas de hueco, redondo de cañas, donde se encierra el maiz).«

5:Nordenskiöld E-5,4(1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chané SF8
South American Indians
53

Pampas in which the corn is stored to protect it from hares.

The above-mentioned village and barns I have, therefore, left out of my map. PATER SCHMIDT[1]) mentions pile-buildings from other tribes too.

FRIEDERICI[2]) has also collected numerous statements referring to the occurrence of pile-dwellings in S. America from the works of older writers.

The table 1 and map 1 which follow show the distribution of pile-buildings in S. America according to LEHMANN, FRIEDERICI and PATER SCHMIDT, together with some additions and corrections.

On the accompanying map I have merely indicated those which seem certainly to be of Indian origin. Those mentioned at the end of the 15th century, as well as those from the 16th are so undoubtedly. I am convinced that the pile-buildings of the Chané and Chiriguano are genuinely Indian, as nowhere in this region do the Whites possess such barns. Their geographical distribution leads us to presume their genuinely Indian origin, as also that they are a culture-element which came to these Indians from the swamps of Mojos, and that they here are an Arawak culture-element too. The use of pile-buildings on hard ground is quite comprehensible to me, as they offer great advantages, whether used for barns or dwelling-houses. The idea must have come, however, from some marshy tract or from a sea-coast where the inhabitants were dependent on ebb and flood tides. In the cases where a people employ pile-buildings on hard ground which is not liable to floods, it is due, as a rule, to conservative ideas — the mode of building to which they were accustomed in their former dwelling-places has become indispensable.

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[1]) P. 1064.
[2]) (5) P. 98.

S:Nordenskiöld E-5, 4 (1908-1909, 1913) 1920
SF10 Chiriguano SF10 ●
Chane SF8
South American Indians S 3

C
Ce
171*
102
342 ●
343
131
S
342
343
102

Map 1. The distribution of pile buildings.

● = Dwelling-houses.
O = Barns.

Nordenskiöld E-5,(1908-1909, 1913) 1929
SF10 Chiriguano SF10
Chané SF1
South American Indians 53

The notion that the pile-buildings employed as barns are here of different origin from those used as dwelling-houses, is unlikely. There is nothing in the geographical distribution to support this idea.

Outside their barns the Chiriguano and Chané have ladders consisting of legs in which steps have been hewn.

Table 1.

Pile buildings. Map. 1.

4. Chiriguano.
5. Chané.
6. Mataco-Vejos. Have evidently copied the Chané barns.
18. Quichua.
25. Mojo, MARBAN P. 132. Cooking-shed.
39. Goijiro, PATER SCHMIDT P. 1064. (after ERNST); Paraulano, JAHN.
47. Indians Roraima: Wapiniana, Arecuna, Macusi, Patamona. PATER SCHMIDT P. 1064; THULIN.
62. Chacobo.
68. Omagua. »Hicieron los indios dentro de sus mismas casas unos tablados de madera, que ellos llaman Iuzas y encima de ellos estuvimos tres meses, que fueron los de Abril, Mayo y Junio con más de seis palmos de agua debajo.
Entraban y salian las canoas dentro de las casas, y de noche quedaban de bajo de los tablados.» LAUREANO DE LA CRUZ P. 88; [MARONI] Vol. XXX. P. 197.
01. Indians on the west coast of Columbia. PINARDO P. 204; CIEZA DE LEON (1) P. 95; OVIEDO T. 3. P. 8; ANDAGOYA P. 76; ROBLEDO P. 277.
3 F. Barbacóa, RIVET (4) AND VERNEAU P. 39.
4 F. Indians on and near Lake Maracaibo. NAVARRETE T. III. P. 8; »A quatro dias llegaron à un pueblo de gherigue-

Königsmühle E-4,4 (1906-1908, 1913) 1920
SF10 Chiriguano SF10
Chane SF8
South American Indians S

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río, que esta armado sobre madera en el agua en unas ciénegas del mismo rio». Oviedo T. 2. P. 293. (See also P. 294 and P. 300); Toledo P. 229.

5 F. Indians at the mouth of the Amazon. «A cabo de seis dias de navegacion tomaron una isla en un puerto y ensenada que el rio hacia en ella, y como tres tiros de arcabuz, por este puerto y ensenada arriba, dieron con unas casas fuertes, armadas sobre grueso y recios estantes que tenian hincados en el proprio cabo desta ensenada de rio o estero que alli se hacia ..... sobre estos estantes o pilares estaban unas salas de tablas de palmas bravas ...» Ortiguera P. 372.

6 F. Indians near Para. «lesquels demeurent dans les loges qui sont des maisons faictes à la forme des Ponts aux Changes et de sainct Michel de Paris, assises sur le haut de gros arbres plantees en l'eau.» Evreux P. 28. The civilised Indians in the same region still live in pile-buildings. Koch-Grünberg (2) T. 1, P. 3; Lange. Several illustrations.

7 p. Oyampi. Pater Schmidt P. 1064. (after Coudreau); Palicours, Fauque P. 359.

8 X. Warrau, Pater Schmidt P. 1064; Ralegh P. 50; Level, P. 60.

9 C. Mataco-Guisnay. (I saw one single barn on piles among these Indians).

1 R. Indians, Darien. Oviedo T. 2, P. 455.

2 R. Caquetios, Federmann P. 191.

Not on the map Galibi, French Guiana. Lombard P. 198.

• Indians Cayambe, Ecuador. Friederici (3). P. 99 (After Montesino and others.)

Pile buildings are among the culture-elements where it is sometimes difficult to decide whether they are Indian or not. In the rubber forests of Bolivia, Peru and Brazil, at favourable spots, are many barracks built on piles. The-

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S:Nordenskiöld E-8,4 (1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chané SF8

dians. A handicraft the Chiriguano and Chané have learnt from the Whites, is tanning.

The dwelling-places of these two tribes have been greatly changed under the influence of the Whites. I have noticed the same phenomenon in several other tracts. The Yamaica, a small Peruvian tribe that I visited in 1904, a few years after its discovery, had already given up the old type of hut and built huts on the pattern of the houses of the Whites. The Huanyam, a small tribe near the Rio Guaporé in Brazil, which had not long been under the influence of the Whites (or more correctly, the negroes), now builds huts on the model of the houses they see at the rubber barracks. Several similar examples could be recorded. Everywhere it is the introduction of the white man's implements, so excellent in comparison with the stone axes, that has brought about the revolution.

The negative influence of the Whites has of course been very great here. The primitive tools have disappeared, a number of implements and ornaments have become rare or have vanished, a quantity of domestic industry has become superfluous, since readymade things have been purchasable from the Whites. The Indian domestic industry is gradually disappearing, but is not transformed under the influence of the Whites.

A race like the Chiriguano or Chané, when it falls under the influence of a culture, such as the Whites', which is very strange to them, very soon, as a rule, utilizes for its own ends such elements as smooth for them the struggle for existence. We know, for instance, with what incredible rapidity the culture of the banana spread among the Indians soon after the Discovery of America, and that in many places it rapidly became one of their most important cultivated plants. And I have already mentioned that, a few years after its introduction, poultry-keeping spread far and wide among the Indians in S. Brazil.

In the matter of ornaments and adornments the Indian

/159 cont./

things. The ceramics /160/ which I found there belong among the very best that I saw among these Indians (Figs. 77 and 78).

From Maringay I returned to Ivu by way of the mission station of Santa Rosa. It has a wonderful location. Like an old fortress, it is built on a narrow hill. Below it, in long rows, lie the grayish-brown Chiriguano huts surrounded by low woods of Mimosaceae, cacti, small algarrobas, and other fine-leaved trees. This woodland is seldom so dense that one cannot easily get out of it without a bush knife. When I was in Santa Rosa,

Fig. 78. Clay vessel made by the wife of the Chiriguano chief Maringay. 1/7.

it was the dry season and everything was burned up. Here too, however, rain probably entices the green out of the dry earth. Sometimes the rain is so long in coming, however, that the Indians do not get any maize and that means -- hunger.

From Santa Rosa one looks far out over the mountains and across the great plain of Boyuovit, over the country that was the native land of the Chiriguano, where, at Curuyuqui, they fought their last battle with the Christians, who assume the right to rob all weaker peoples.

After my excursion to Maringay I left the land of the Chiriguano and Chané and paid my second visit, already described in this book, to the Chorote and Ashluslay.

6: Nordenskiöld--24 E-6 (1908-1909) 1912 SF10 Chiriguano SF/C
Chané SF 6

/171 cont./
on the Río Parapití make raids on the Tsirakua Indians. The Ashluslay also maintain, as my interpreter told me, that /172/ the Toba chief Taycolique, during his invasion of their territory in 1909, had several Chiriguano with him.

Batiruyu said that in former times the Chané brought home the heads of their slain enemies and set them up on the plazas of the villages during festivals.

Fig. 82. Clay vessel of the Chané. 1/4.
Río Parapití.

/172/ Chapter Eleven

From the Land of the Chané and Chiriguano Indians

Everyday Life in the Chané and Chiriguano Huts

As a rule, I felt very comfortable in the huts of the Chané and Chiriguano. The life in these villages is exactly the same. If one describes one village, he has described almost all of them.

Like all the other Indians whom I visited south of Santa Cruz de la Sierra in Bolivia, these Indians live in villages. Some of these villages are quite large and inhabited by several hundred persons. Often many villages lie close together. The huts, as a rule, lie around a market place on which sweetsop trees are occasionally planted for shelter in the rainy season. The market places serve as playgrounds and meeting places. The huts, in contrast to the round Chorotí and Ashluslay huts, are square, and their doors, facing the village, are set in the gable. They are made of cane or wooden slats, with roofs of grass. Not infrequently they are plastered with earth.

G: Nordenskiöld--25 E-5 (1908-1909) 1911 SF10 Chiriguano SF10
Chane SF3

/173 cont./

Under the influence of the whites, however, the Chané and Chiriguano are gradually changing their huts, and many Indians are already building huts that are identical with theirs.

No but here has its original Indian form. The genuine Chiriguano hut (the original Chané hut are not known) were very large; up to 100 persons lived in one house, and the entire /174/ village consisted of only a few large huts (1). These

1. Anales de la Compañía de Jesus. -- Tucuman y Perú -- 1606. Relaciones geográficas de Indias. Madrid, 1881. Vol. II. Page CIV.

evidently corresponid to the large family houses well known in Brazil, which I saw in Bolivia only among the Chacobo, a Pano tribe from Lago Rojo-Aguado.

Even in Viedma's (2) time, at the end of the eighteenth

2. Viedma: loc. cit.

century. /Fig. 83 appears here/ however, they seem to have given up the original type of house and built smaller huts.

In many villages there belongs to each hut one or more maize-granaries (Fig. 84a), in which maize, gourds, etc. are /175/ stored. These granaries are built on piles and are perhaps a reminder of the time when the Chiriguano and Chané lived in swampy regions. To each granary there belongs, as a rule, a ladder (Fig. 84b). Sometimes the granaries and the dwellings are built together into one house. /Fig. 84a appears here./ I saw such huts in the vicinity of Macharetí and at Tatarénti, not far from Ivo. Not infrequently the granaries stand in the field, far from the dwellings.

These villages are neat and clean. Huts and market places are swept daily and the refuse is burned.

The space in the hut is not too cramped. /176/ In each house, as a rule, there lives only one family, which, aside from the rest of the family members, sometimes consists of the husband

6: Nordenskiöld--26 E-5 (1908-1909) 1912 SF10 Chiriguano SF10
Chané SF8

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/176 cont./
of the daughters, who, during the betrothal and at the beginning of the marriage, live with the mother-in-law. In front of the hut is the large hearth (Ill. 83) where the maize beer, and sometimes also the food, is cooked. /Fig. 84b appears here./ Inside the hut there is likewise a hearth where cooking is done and where one seeks warmth on cold nights and days.

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Fig. 83. Hearth for boiling maize beer. Chané village. Río Itiyuro. To the right in the picture, large vessels in which the maize beer ferments. The house is plastered with earth.

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I have slept in these huts many a night. They are, as a rule, free of vermin, which cannot be said of the dwellings of all other Indians and of the houses of the whites. The sleeping place either consists of a bed made of a species of bamboo cane, or one lies /Plate 16 appears here/ /177/ on the ground on a reed mat or a skin. One also sees hammocks in the huts.

Ce 342 512

/177 cont./

It is very cozy in a Chané or Chiriguano hut, especially in the evening when they all creep toward the beautiful, warming fire, when tongues wag, the old ones tell stories, the mothers put their little ones to bed, the young couples sit apart and whisper.

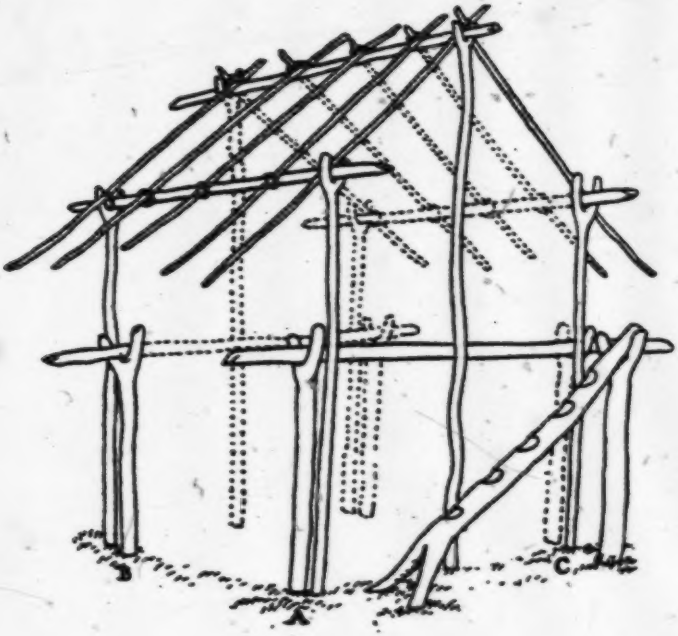

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Fig. 84b. Illustration showing the construction of the granary.

[P. 190 is blank]

142 To me, the Chiriguano seemed to be of better physique than both the Puna and the Chaco Indians, and their cast of features, as a rule, to be less rough-hewn than those of the above-mentioned tribes. Herma ten [141 Kate has taken anthropological measurements of four Chiriguano men, [127] whose average height was determined at 160.1 cm.[1] Lehmann-Nitsche, who has made anthropological observations of 50 Chiriguano (40 men and 10 women), is my authority for the data I have grouped together in the subjoined table.[2]

The Chiriguano; some physical data.

Sex	Average height, cm	Shape of skull	Colour of skin, Luschan's scale	Colour of hair, Fischer's scale	Iris, by Martin's scale
Men.....	163.4	Dolichocephalic — mesocephalic	Majority 22	Majority 4	Majority 3—4
Women.....	151.7	Dolichocephalic — mesocephalic	Majority 18	Majority 4	Majority 3—4

142 The Chiriguano complexion is, accordingly, brown with a tint of yellow; the iris is dark brown, the hair black, coarse and lank. The growth of hair on face and body is very scanty.

361 The Chiriguano are not a nomadic people, but live in permanent villages, some of which are the abode of only a few families, whilst others contain [114] several hundreds of inhabitants. At Ibitibi I was studying a Chiriguano village that, according to the Indians, was inhabited by about 300 people. This village was situated on a plain surrounded by wooded mountains (fig. 188). The huts formed a large circle, with the chief's hut in the centre. In the open space between the chief's hut and the rest, there were growing some close-foliaged trees (probably of the Bignoniaceæ family), affording much-needed shade. In earlier literature it is stated that [574] [609] the Chiriguano used to build a hut for strangers in the middle of the village plaza.[3] In many of the Chiriguano villages I visited, the huts were scattered about without any perceivable order.

● 342 The huts are rectangular and with ridged roofs. (Figs. 188—192.) The walls either consist of perpendicular sticks, of tree-branches or reeds,

[1] Ten Kate (1), p. 26.
[2] Lehmann-Nitsche (1).
[3] Nordenskiöld (12), p. 2.

342 placed close together and fastened with withies lashed on horizontally (figs. 189 and 190), or of branches woven together and daubed with clay (fig. 191). The roof, the construction of which is apparent from fig. 217, is thatched with grass. This is an especially interesting *method of roof-construction, used in Peru already in the pre-Columbian period*, a fact plainly evident from an ancient Peruvian vase-painting[1] (fig. 193). The walls and the roof are supported by a hut frame consisting of poles (fig. 217).

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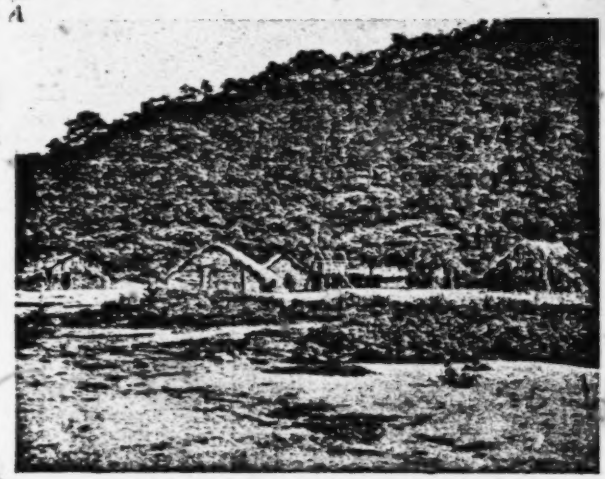

Fig. 188. Part of a Chiriguano village. Two small pile-buildings, used as maize-barns can be seen between the huts. Ibitibi. Bolivia. Photo. E. v. R.

343 The granaries for storing maize are always built on pole supports
417 (figs. 188 and 192). Fig. 191 shows a step-ladder leaning against a tree.
[322] Step-ladders of this kind, usually hewn out of a single piece of wood, are used by the Chiriguano as means of access to these pole-supported granaries.

174 Baron E. Nordenskiöld, who has made a valuable analysis of the distribution
342 of pile-buildings in South America[2], considers that when pile-buildings occur among a tribe inhabiting a region not exposed to inundations, then the idea of constructing buildings raised on piles has generally originated at the time when the tribe inhabited some other region, either a swamp,

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[1] Joyce (1), fig. 13.
[2] Nordenskiöld (12), pp. 3—8.

1 [see cat. 116, P. 215 -- Analyst]
2 [see cat. 116, p. 195 -- An.]

Rosen E-5 (1901-1902) 1924 SF10 Chiriguano SF10

Fig. 189. Woman at a cooking-fire in front of her hut. In the foreground a gourd-patch; to the right an open cooking shed, the roof of which was used as a rough pantry. Chiriguano. San Luis. Bolivia. Photo. E. v. R.

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Fig. 190. Woman in front of her hut. In the foreground a bedstead on which lies chewed maize; this maize is used in the preparation of »chicha», an intoxicating beverage. Chiriguano. San Luis. Bolivia. Photo. E. v. R.

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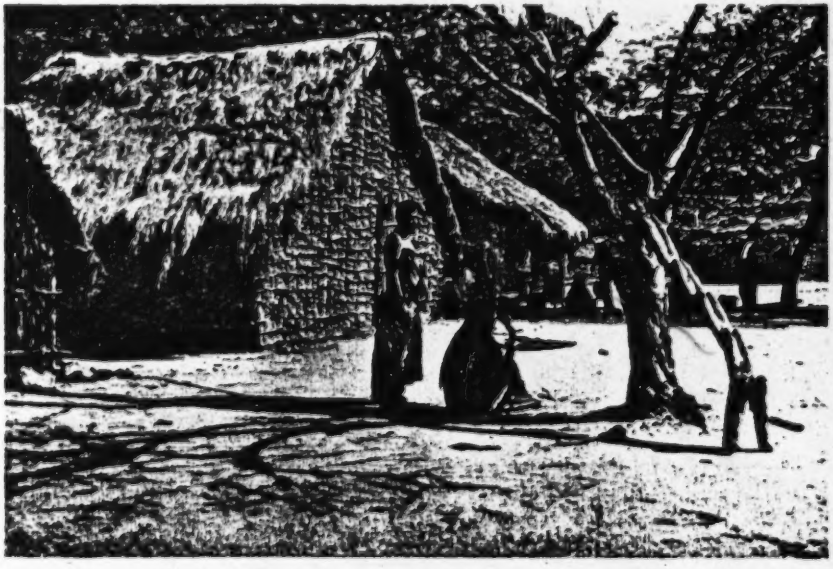

Fig. 191. Huts in the periphery of the circular market-place in the Chiriguano village of Ibitibi. In right foreground, a ladder used on going to the pile-barns for maize. Bolivia. Photo. E. v. R.

[P. 194 is blank]

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342 or a district threatened with flooding through rainfall or the flowing in
[114] of the oceanic tide. In my opinion, however, this has usually not been the case.

342 According to my thinking, it is the fear of predatory animals that has
343 given rise to the pile-construction idea. Those granaries built on pole-
825 supports, that are so commonly met with in widely different countries,
174 have, we know, as a rule been constructed for the express purpose of
[171] furnishing protection against noxious animals, such as lesser carnivora, rodents and insects. As an example, the »njalla» of the Lapps is built

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Fig. 192. Part of a Chiriguano village. To the right a pile-barn. Ibitibi. Bolivia. Photo. E. v. R.

342 as a protection against wolverines[1], and many of the native tribes of
343 Africa erect their food depositories, or grain bins, on pole-supports to
825 make them safe against mice and white ants.[2] Both the Balenge people,
171 who inhabit a fairly arid country, and the Babisa, who live on the edge
174 of the Bangweolo swamp, build their corn bins on piles.[3] As the Babisa often build their huts on a platform of beaten clay[4] (not piles, it will be noted) as a protection against the annual heavy floodings of the rainy season, this will naturally give rise to the supposition that the Babisa

[1] von Dueben (1), p. 35.
[2] von Rosen (4), pp. 411—412.
[3] von Rosen (4), pp. 332, 349 (fig. A), and 411—412.
[4] von Rosen (4), p. 319 and plate 67 (figs. C and D), also plate 68, fig. D.

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7:Rosen E-5 (1901-1902) 1924 SF10 Chiriguano SF10

342 granaries, at any rate, are raised on supports in order to keep the stored
343 crop from getting wet. That such is not the case will, however, be
825 apparent from the fact that the granaries are empty during the time of
171 the rains. It should be remembered that, in these parts, the period of
174 vegetation coincides with the duration of the rainy season, and that the crops are harvested and stored only after the cessation of the rains. During the time the grain reposes in the granaries no rain falls at all, and on that account the granaries of the Balenge are often unprovided with a roof.[1] Moreover, Babisa, as well as Balenge, stated that the pile-built grain bins were constructed solely as a protection against damage to the corn from rats and white ants. The practice of erecting buildings on piles as a safeguard against flooding is entirely non-existent in the Bangweolo region.

Fig. 193. Ancient Peruvian hut. Vase-painting. After Joyce.

The fundamental idea of storing food in structures built on piles may, in my opinion, be traced back to the custom of primitive peoples of keeping freshly killed meat, and other food, safe from depredation by larger or smaller raiding animals, by suspension on trees. The »njalla», which is erected on a single pole, or on the lopped stem of a growing tree left on its root, may, I think, be taken to be a development of the primitive tree cache. The four-poled Lappish larder called »luopte», or »luove» (cfr. the Swedish words »loft», and »lave»), is on the other hand most probably an imitation of the »hebrä» stores of the land-settled folk, which, presumably, also have received their pile-building construction with a view to forming a protection against noxious animals. For the »hebrä» is probably nothing but a development of the »lave». In order to keep divers implements safe, not only from wild animals, but also from mischievous domestic cattle, such as goats, it is sometimes necessary to construct at the homestead a »lave», the floor of which is either supported by three or four rooted tree-stumps, or by poles driven into the ground (fig. 189). When it is desired to shelter the stored utensils from rain, a roof is built at a suitable height from the floor, and if a still more effective shelter is required, the space between the floor and the roof is filled in with walls. At the stone-age

[1] von Rosen (4), fig. 325.

7:Rosen E-5 (1901-1902) 1924 SF10 Chiriguano SF10

experiment carried out at Rockelstad in the summer of 1919[1], the» stone-age men» soon found themselves compelled to build a »lave» so that the goats should not damage such foodstuffs and implements as had to be kept outside the hut.[2]

It is my belief that the »lave» has also supplied the idea of building dwelling-houses on pole-supports. Wherever people in a certain stage of civilization have found themselves settled on solid ground, they have had need of raised food-platforms, partly for keeping their foodstuffs safe from damage on the part of domestic as well as noxious animals, partly for the purpose of drying, smoking or roasting the food (see pp. 38, 47 and 48). If such a people, living on the edge of a lake or a swamp, had wished — for defensive purposes or some other reason — to build their dwelling-huts or other buildings in the water, then, if the bottom of the lake afforded good holding for piles, such buildings would have been constructed in the same way as the food-platforms or pole-supported granaries previously employed on firm ground (compare fig. 28 with fig. 115). Where the people in question has been lacking in sufficient skill to construct large pile-buildings in the water, or if the lake bottom was unsuited to this mode of construction, then huts were built on rafts or quagmire islands, after the manner of the swamp dwellers of Alvastra and Bangweolo.[3]

The furnishing of the Chiriguano huts is exceedingly plain. The fire-place, which forms a very necessary heating centre at night during the cold season, consists of a few stones serving as supports for the cooking pots. There is no hole in the roof for letting out the smoke, which has to find its way out through the doorway or through fissures in the walls. As a rule, the food is generally cooked on a fire outside the hut (fig. 189).

Bedsteads of the type seen in fig. 190 are to be found in nearly every hut. These bed frames are made of laths or reeds, and are covered with skins. Nordenskiöld states as his opinion that the idea of these bedsteads has not been borrowed from the civilization of the whites.[4] In the analytical treatise he has written upon this question he adduces conclusive arguments for his opinion, as it seems to me. In Central Africa, one finds bedsteads that are very similar to the Indian ones,[5] and that certainly have not

[1] Klein, pp. 88—89.
[2] Klein (1).
[3] For lake- and marsh dwelling-places in different parts of the world, see Montelius (1).
[4] Nordenskiöld (12), pp. 8—12.
[5] von Rosen (4), p. 403.

7:Rosen E-5 (1901-1902) 1924 SF10 Chiriguano SF10

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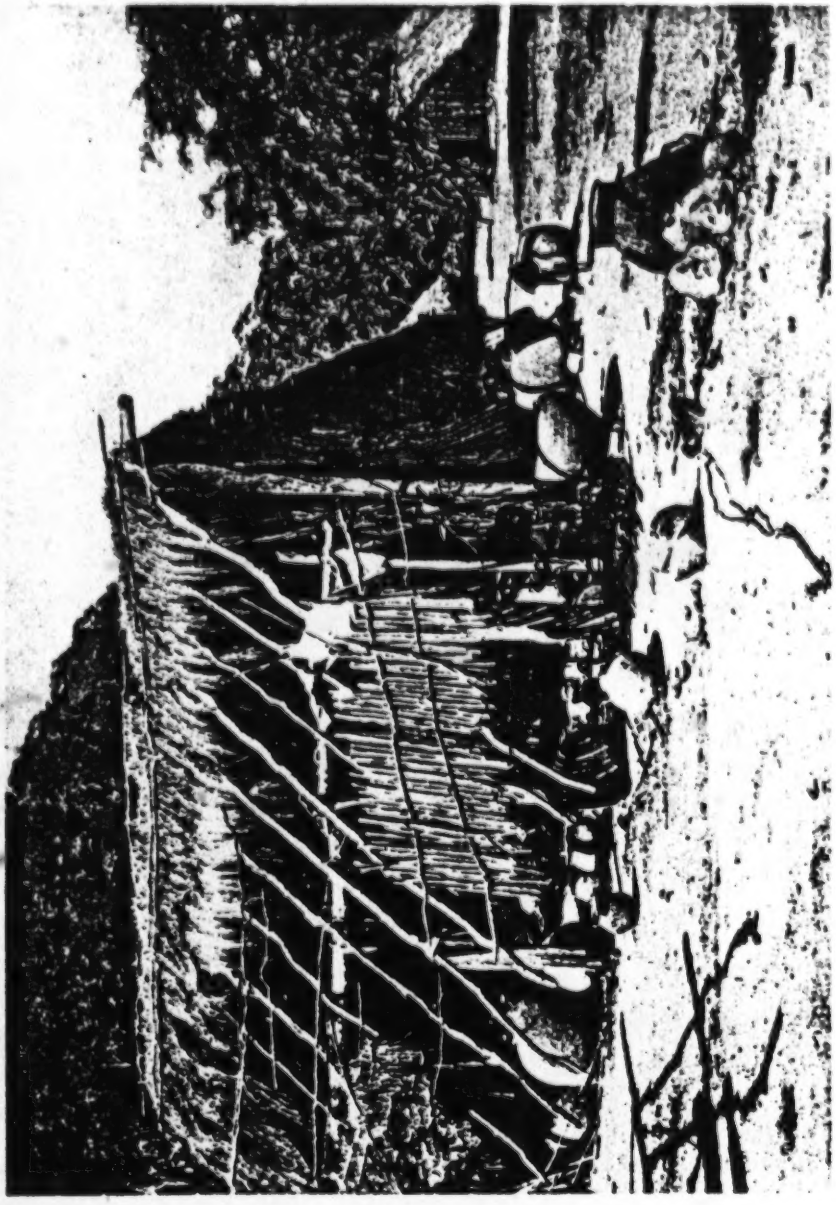

Fig. 317. A pottery workshop. Chiriguano. Ibiibi. Bolivia. Photo. E. v. R.

C 114 /2 cont./ outside of the Toba, whom I met only in passing. I got to know on this journey the Chiriguano and the Izozó, who, like the former, speak a dialect of the Guaraní language; the Tapieté, Churupí, Mataco, and Chorote. All of these Indian tribes are not unknown in ethnological literature. On Chiriguano history we are oriented through old documents from even the first years of the Spanish conquest, and we owe to the Franciscan missionaries, who have taught among them for a long time, quite important ethnological publications. The Churupí have been studied minutely under the name Ashluslay by Erland Nordenskiöld, and the Oblates of Immaculate Mary in Esteros and Lake Escalante are striving intensively to make ethnological investigations. I have proposed to deal with all of these tribes systematically. This survey will be made on the basis of the results of my journey, and I begin in this first publication with the Chiriguano and Izozó.

General Information

As I said in the introduction to this work, I first met the Chiriguano in Machareti and the Izozó in the area around the fort of Toledo and in the fort "15 de Agosto," several kilometers from the former two.

Figure 1 presents a view of Machareti, a Chiriguano town created in its present form by the Franciscan mission. When the Paraguayan army retook Machareti, it had already been abandoned by the Padres, and now a Chiriguano, in the role of commissioner /comisario/, is the chief of the town, there also being a few caciques. The houses, more or less in the form of modern ranchos (cf. Figs. 14 and 15 /see p.40 /), are on both sides of wide streets which run parallel and at right angles, as in most of the towns of the former Spanish colonies. When I was present in Machareti, there was great need /3/ among these Indians because of the severe drought which had ruined their plantings, which were some distance from the town. At the side of the ranchos are often found deposits which were structures of native houses built on sticks. Although

[See P. 8 -- Analyst]

/14 cont./

131 without our having any information on their stopping place. [563] Some Chorote live in the territory of the Chiriguano, near [797] Yacuiba, and also, without counting the missions, the whole territory has been penetrated by whites and mestizos.

131 174 According to these data given by Nordenskiöld, the territory of the Chiriguano, after their definitive subjection by the whites and up to the present time, has remained the same as that which they had at the time of their independence, except, it would seem, that they have come down more into the valleys and do not now live, as was stated in the 16th century documents, on top of the inaccessible mountains, which, as natural fortresses, offered them a secure refuge during their expeditions.

Towns and Houses

361 177 The arrangement of the towns and the form of the houses of the Chiriguano are not at the present time the primordial ones, and they have probably passed through two different transformations, one after the other, first under the influence of the architecture of Inca culture and later the architecture of the whites. /15/ According to the Annua de la Compañia de Jesús Tucumán and Peru, of the year 1596, the Chiriguano towns were composed of only a few houses that were large enough to house as many as 100 persons. In his "Descripción breve de toda la 361 342 621 [113] tierra del Perú, Tucuman, Rio de la Plata y Chile /A Brief Description of all the Land of Peru, Tucumán, Río de la Plata, and Chile/," Father Lizarraga (56) describes the Chiriguano

56. Madrid, 1909. Nueva Biblioteca de Autores Españoles, Vol. 15. Cited in Nordenskiöld.

towns in the following way: "The largest of the towns is one of five houses: the common number is three; but they are very long, more than 150 paces, with a two-sloped roof with posts in the middle, upon which the framework is constructed, and one kin group /parentela/ lives between one post and the next one."

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next one." Garcilaso de la Vega (57) describes the large houses

57. Vol. II, p. 281. According to Métraux I, p. 331.

of the Chiriguano in the same way: they build a very large dormitory, and inside as many alcoves as there are residents, and so small that there is no room for anything but persons. Through detailed descriptions and sketches, we are familiar with the construction of the towns of the ancient Guaraní of the Tupinambas on the eastern coast of Brazil (58). Four or

58. According to De Bry. Métraux, A.: La civilisation matérielle des tribus Tupí-Guaraní /The Material Culture of the Tupi-Guarani Tribes/. Paris, 1928.

five long, rectangular houses were built a short distance from one another around a quadrangular or pentagonal plaza, and the whole town was fortified by a defensive wall. We also know that the ancient towns of the Chiriguano had such defensive constructions through information from the year 1618, when Ruiz Diaz de Guzman found such a fortification of a Chiriguano town near the Pilcomayo River, which consisted of "two concentric walls of stone and of wood" (59). According

59. Moreno II, p. 252.

to Serrano (60), the Guaraní towns of the ancient Province of

60. Antonio Serrano: Etnografía de la antigua provincia del Uruguay /Etnography of the Ancient Province of Uruguay/, Paraná, 1936, p. 125 /the second number of this figure is questionable, being barely discernible in the original text/.

Uruguay consisted of only four to eight large rectangular houses.

/15 cont./

"In 1627 the Jesuits found near Yapeyú a Guaraní aldea with four houses in which some 100 Indians lived. They found identical dwellings in San Ignacio and nearby regions. These houses were quadrangular and extremely long, often in excess of 50 meters."

Even during the time of their independence the Chiriguano had departed from the primordial construction of their towns, which had served in the first place for defense, since at the end of the 18th century Viedma describes their houses as "a few small ranchos made of cane" (61).

61. Viedma, Francisco de: Descripción de la provincia de Santa Cruz de la Sierra /Description of the Province of Santa Cruz de la Sierra/. Colección Angelis, Vol. 3, Buenos Aires, 1836, written 1793, p. 181. Cited by Nordenskiöld.

Photographs of Chiriguano Towns (ténta) and Houses (o)

I.C. 353. Chiriguano town, Machareti (Fig. 1).
I.C. 355. Scene in the town of Machareti (Fig. 17).
I.C. 356. Chiriguano in front of their house in Machareti (Fig. 14).
I.C. 357. Chiriguano storehouse in Machareti (Fig. 16).
I.C. 358. Chiriguano boys in front of their rancho in Machareti (Fig. 15).

The Chiriguano town of Machareti was built in its present form by Franciscan missionaries, with wide, parallel, and right-angled streets, following the common form of old Spanish colonies, since their construction is not a product of the indigenous Chiriguano culture. But in parts, the houses and primarily the maize storehouses built on posts, correspond to the houses of other Chiriguano towns, on which we have information from Erland Nordenskiöld and Eric v. Rosen (62).

62. Nord. 1, pp. 173, 176. Nord. 2, pp. 1-3. Eric v. Rosen, op. cit., pp. 191 and 192, Figs. 188-192.

/16/

36| The town Ibitibi in the southern part of Chiriguano terri-
62| tory, south of the Pilcomayo River, examined minutely by
162 Eric v. Rosen, was inhabited, according to the Indians, by about 300 persons. The town was located on a plain surrounded by mountains and forests. The houses formed a large circumference, the cacique's house being in the middle. Some shade trees had been planted in the open plaza between the cacique's house and the other houses. In other Chiriguano towns visited by v. Rosen, houses were dispersed without any order. According to the observations of v. Nordenskiöld too, Chiriguano towns are sometimes quite large and inhabited by around 100 persons. Often several towns are near one another. The houses are generally around a plaza sometimes planted with trees and serving as a place to play and to hold meetings.

● 342 We know the form of the Chiriguano houses in detail through v. Rosen (63), and primarily through the good photo-

63. Eric v. Rosen, op. cit., p. 191; Figs. 188-192 and 217.

graphs of such houses. The houses are rectangular and their roofs [335] end in points. Walls and roofs are held up by posts. The walls consist either of only vertical poles made from branches or reeds, close together and tied by horizontal ligatures, or of interwoven poles whose interstices are plastered with mud. The roof (opitiá) is covered with straw. One type of house was illustrated in a photograph by v. Rosen (64), on which one

64. Eric v. Rosen, op. cit., Fig. 190.

side of the roof projects at the top over the other side of the [171] roof. The same house type also exists in the ancient culture of the Peruvians, as is shown by sketches found on the surface of ancient Peruvian vessels.

/16 cont./

342 A special feature of Chiriguano houses and where they differ from those of the common ranchos of white residents is that the two oblique sides of the roof descend almost to the ground, passing far beyond the wall. Machareti houses also show this special feature. (Cf. Fig. 14 /see p. 40/.) The result of this roof construction is that the entrance (ōkye) is on the gable side. To shut the entrance they use reed mats or cowhides (65). Widely influenced by the whites, the Chiriguano

[285] [237] [177]

65. Métraux I, p. 469.

and the Chané continually vary the style of their houses, and, according to Nordenskiöld (66), today many of them are al-

66. Nord. 1, p. 173.

ready building houses identical with those of the whites.

343 In addition to the houses used for dwellings, the Chiriguano and some of the Chané have houses built on posts for storehouses (avatió). Also in Machareti such houses were commonly found beside the dwellings. Figure 16 /see p. 41 / shows such a storehouse. A ladder, which consists of a post provided with notches, leads to the platform (on the right in the figure). These storehouses serve primarily as places to keep the maize crop and other produce. The space under the platform serves for storing various other things. Nordenskiöld saw such houses built on posts, whose upper part served in general for storage, while the lower part was utilized as a dwelling (67). Often those

[417]

67. Nord. 1, p. 175; Nord. 2, p. 3.

storehouses are near the plantings far from the dwellings (68).

68. Nord. 1, p. 173.

As shown in Figure 16, the frame for these storehouses consists of ten vertical posts of different lengths, bifurcated at their upper ends to support the horizontal posts that form the base for

[335]

ft Schmidt--40 E-5 (1938) 1938 SF10 Chiriguano SF10

Plate VI

342
352
516
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Fig. 14
(I.C. 356) -- Chiriguano women and children in front of their house in Machareti

291
516

Fig. 15
(I.C. 358) -- Chiriguano in the town of Machareti